


IN THE CLAIMS

Please cancel claims 1-9, and add new claims 10-21.

1-9. (deleted)

10. (new) A spectral distance calculator, comprising:

a calculator for performing a spectral distance calculation comparing an input spectrum of an input signal in the presence of a first known noise signal and a reference spectrum;

 a memory for pre-storing one or more noise spectrums of one or more known noise signals including the first known noise signal; and

masking circuitry for masking the spectral distance between the input spectrum and the reference spectrum using the pre-stored noise spectrum of the first known noise signal.

11. (new) A spectral distance calculator according to claim 10, wherein the calculator is configured to assign the spectral distance between the input spectrum and the reference spectrum a zero value for each frequency of the input spectra which is due to noise.

12. (new) A spectral distance calculator according to claim 10, wherein the noise has a lower level than a level of the input spectrum.

13. (new) A spectral distance calculator according to claim 10, wherein the spectral distance calculation includes calculating to the following expression for spectral distance D_n :

$$D_n = \sum_i A_i |R_n(f_i) - S_n(f_i)|,$$

where $R_n(f_i)$ is the reference spectrum, $S_n(f_i)$ is the input signal spectrum, and A_i is equal to zero if a frequency f_i of the input signal is due to any known noise and A_i is unity if no noise is present at the frequency f_i .

14. (new) A speech recognition system for comparing an input spectrum and a reference spectrum using the spectral distance calculator according to claim 10, further comprising:

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a selector for selecting a reference spectrum minimizing a spectral distance between the input spectrum and the reference spectrum.

15. (new) A speech recognition system according to claim 14, wherein the spectral distance is the sum of the spectral distance calculations for a number of samples discerning the reference spectra from each other.

16. (new) A speech recognition system according to claim 14, wherein the spectral distance calculation includes calculating to the following expression for spectral distance D_n :

$$D_n = \sum_i A_i |R_n(f_i) - S_n(f_i)|,$$

where $R_n(f_i)$ is the reference spectrum, $S_n(f_i)$ is the input signal spectrum, and A_i is equal to zero if a frequency f_i of the input signal is due to any known noise and A_i is unity if no noise is present at the frequency f_i .

17. (new) A mobile telephone including a speech recognition system according to claim 14, comprising:

call answering circuitry operatively connected to the speech recognition system and responsive to one or more speech answering commands each forming an input spectrum.

18. (new) A mobile telephone according to claim 17, wherein the call answering circuitry is responsive to an accept call command for accepting a call.

19. (new) A mobile telephone according to claim 17, wherein the call answering circuitry is responsive to a reject call command for rejecting a call.

20. (new) A mobile telephone according to claim 17, wherein the call answering circuitry is responsive to a forward call command for forwarding a call.

21. (new) A mobile telephone according to claim 17, wherein the spectral distance calculation includes calculating to the following expression for spectral distance D_n :

$$D_n = \sum_i A_i |R_n(f_i) - S_n(f_i)|,$$

where $R_n(f_i)$ is the reference spectrum, $S_n(f_i)$ is the input signal spectrum, and A_i is equal to zero if a frequency f_i of the input signal is due to any known noise and A_i is unity if no noise is present at the frequency f_i .